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09/931,960	08/16/2001	Duncan M. Kitchin	42390P10675	5428

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EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,960

Applicant(s)

KITCHIN, DUNCAN M.

Examiner

Ashok B. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 28-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-30 are subject to examination. Claim 27 has been cancelled.

***Response to Arguments***

2. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (hereinafter Thompson) (US 2004/0214572 A1) in view of Applicant Admitted Prior Art (hereinafter AAPA).

**Referring to claim 1,**

The reference teaches an apparatus (Fig. 6) comprising:

a transceiving circuit of an access point to transmit data to or receive data from one or more subscribers through a wireless transmission medium (Page 5, para. [0074], "Each wireless access point (AP) 120 may have a wireless connection or transceiver (e.g., an antenna) and may operate according to various wireless standards, such as wireless Ethernet (IEEE 802.11), Bluetooth, etc.);

a first data link control (DLC) circuit adapted to transmit data between the transceiving circuit and one or more devices coupled to a first wired communication

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network (Fig.6, page 5, para.[0075],[0076], page 4, para. [0041], [0042] **Note:** The reference teaches "the system provides a plurality of virtual APs, where a virtual AP may comprise access point functionality implemented in software that appears as a physical AP to a PCD. The plurality of virtual APs or "software" APs may be implemented on one or more physical APs, e.g., on a common set of physical APs. For example, each physical AP may implement a plurality of virtual APs. Each instance of a virtual AP executes a complete 802.11 protocol stack, and may be indistinguishable from a hardware AP to any wireless network client(s)" and "Each of the APs may connect to a "wired" LAN. In one embodiment, the "wired" LAN supports a VLAN (Virtual LAN) protocol. In order to partition the network, the network system may maintain a binding between the ESSID and IEEE 802.1(q) VLAN tags or their equivalent. This allows a common wired backbone (using VLAN-capable Ethernet switches) to supply a secured "virtual LAN" to each WSP", thereby the reference teaches a path (circuit) adapted to transmit data between the transceiving circuit and one or more devices coupled to a first wired communication network) ;

a second DLC circuit adapted to transmit data between the transceiving circuit and one or more devices coupled to a second wired communication network (Fig.6, page 5, para.[0075],[0076], page4, para. [0041], [0042] Note: please refer to the explanation on reference's teachings as above for these limitations.).

Thompson fails to teach "circuitry to control transmission of a first beacon signal- and a second beacon signal in the wireless transmission medium from the transceiving circuit, the first beacon signal comprising information associated with the first wired

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communication network and the second beacon signal comprising information associated with the second wired communication network.

AAPA teaches "In a wireless access point according to the WLAN standard IEEE 802.11, for example, a set of beacons may be transmitted for each BSS and ESS to include an associated BSSID and ESSID. A common Timing Synchronization Function (TSF) may be implemented for the generation of multiple interleaved target beacon transmission times (TBTTs). Here, TBTTs for each BSS of an access point may be interleaved by maintaining constant offsets referenced to the TSF."(specification page 12, para.[0029])

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement AAPA method of beconing as an alternate for Thompson such that a plurality of service providers to utilize a common set of access points to provide service to a potentially overlapping set of customers. This would also provide subscribers or users with the ability to more fully utilize the existing network infrastructure. It would further be desirable to provide a distributed wireless network system which can selectively provide different access levels to users of the system, as taught by Thompson.

**Referring to claim 2,**

The reference teaches the apparatus of claim 1, wherein the first and second wired communication networks comprise distinct physical transmission media. (page 5, para.[0075] and [0076])

**Referring to claim 3,**

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The reference teaches the apparatus of claim 2, wherein the apparatus further comprises a first bridge coupling the first DLC circuit to the first wired communication network and a second bridge coupling the second DLC circuit coupled to the second wired communication network. (Fig.6, page 13, para. [0147], For example, packets from PCD 110A may be routed to virtual access point 602B which is associated with local network 130. In contrast, PCD 110B of a second user comprises identification information which includes a higher access level which encompasses accessing local resources on network 130 as well as Internet access. In this instance, in addition to local network access, data or packets may also be routed from the PCD 110B through the access point 120 and directly out to an external access port for Internet access.", thereby the reference impliedly teaches the coupling bridge to each networks.)

**Referring to claim 4,**

The reference teaches the apparatus of claim 1, wherein the first and second wired communication networks comprise a common physical transmission medium. (page 4, para.[0042], page 5, para.[0075] and [0076])

**Referring to claim 5,**

The reference teaches the apparatus of claim 1, wherein the first DLC circuit is associated with a first media access control (MAC) address on the first wired communication network and the second DLC circuit is associated with a second MAC address on the second wired communication network. (page 3, para. [0031], page 4, para.[0040], page 8, para. [0096]-[0099])

**Referring to claim 6,**

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The reference teaches the apparatus of claim 5, wherein the first DLC circuit is adapted to transmit data between a first class of subscribers and devices coupled to the first wired communication network, and wherein the second DLC circuit is adapted to transmit data between a second class of subscribers and devices coupled to the second wired communication network. (Fig.6, page 11, para.[0124], page 12, para.[0136]-[0143])

**Referring to claim 7,**

The reference teaches the apparatus of claim 5, wherein the first and second DLC circuits are coupled to the transceiving circuit at a common lower DLC circuit, and wherein the first DLC circuit is coupled to the first wired communication network at a first upper DLC circuit and the second DLC circuit is coupled to the second wired communication network at a second upper DLC control circuit. (page 8, para.[0095], page 4, para. [0041], [0042] **Note:** The reference teaches "the system provides a plurality of virtual APs, where a virtual AP may comprise access point functionality implemented in software that appears as a physical AP to a PCD. The plurality of virtual APs or "software" APs may be implemented on one or more physical APs, e.g., on a common set of physical APs. For example, each physical AP may implement a plurality of virtual APs. Each instance of a virtual AP executes a complete 802.11 protocol stack, and may be indistinguishable from a hardware AP to any wireless network client(s)" and "Each of the APs may connect to a "wired" LAN. In one embodiment, the "wired" LAN supports a VLAN (Virtual LAN) protocol. In order to partition the network, the network system may maintain a binding between the ESSID

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and IEEE 802.1(q) VLAN tags or their equivalent. This allows a common wired backbone (using VLAN-capable Ethernet switches) to supply a secured "virtual LAN" to each WSP", thereby the reference teaches wherein the first and second DLC circuits are coupled to the transceiving circuit at a common lower DLC circuit (path provided the physical AP) , and wherein the first DLC circuit is coupled to the first wired communication network at a first upper DLC circuit and the second DLC circuit is coupled to the second wired communication network at a second upper DLC control circuit (path provided by each of the virtual Aps to the appropriate network elements via appropriate networks .)

**Referring to claim 8,**

Thompson teaches at para.[0032], "Alternatively, each of the access points may be operable to broadcast requests for identification information, e.g., broadcast recognized System IDs to the PCDs, wherein the PCDs may respond to this broadcast by providing the identification information. Such broadcasts by APs are known as "beacons". (circuitry to generate a plurality of interleaved target beacon transmission times (TBTTs) based on a time synchronization function (TSF) and to maintain constant offsets between the plurality of interleaved TBTTs based on the TSF., Note: this is inherent to sending beacons periodically.)

**Referring to claims 9 and 10,**

The reference teaches the apparatus of claim 8, wherein the first beacon signal is associated with a first basic service set and the second beacon signal is associated with a second basic service set, and wherein the first beacon signal is associated with a first



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extended service set and the second beacon signal is associated with a second extended service set. (page 15, para.[0158], page 4, para.[0040], page 4, para.[0042], page 6, para.[0081], page 8, para.[0096]-[0098])

**Referring to claim 11,**

Claim 11 is a claim to a method carried out by the apparatus of claim 1. Therefore claim 11 is rejected for the reasons set forth for claim 1.

**Referring to claim 12,**

Claim 12 is a claim to a method carried out by the apparatus of claim 2. Therefore claim 12 is rejected for the reasons set forth for claim 2.

**Referring to claim 13,**

Claim 13 is a claim to a method carried out by the apparatus of claim 3. Therefore claim 13 is rejected for the reasons set forth for claim 3.

**Referring to claim 14,**

Claim 14 is a claim to a method carried out by the apparatus of claim 4. Therefore claim 14 is rejected for the reasons set forth for claim 4.

**Referring to claim 15,**

Claim 15 is a claim to a method carried out by the apparatus of claim 5. Therefore claim 15 is rejected for the reasons set forth for claim 5.

**Referring to claim 16,**

Claim 16 is a claim to a method carried out by the apparatus of claim 6. Therefore claim 16 is rejected for the reasons set forth for claim 6.

**Referring to claim 17,**

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Claim 17 is a claim to a method carried out by the apparatus of claim 7. Therefore claim 17 is rejected for the reasons set forth for claim 7.

**Referring to claim 18,**

Claim 18 is a claim to a method carried out by the apparatus of claim 8. Therefore claim 18 is rejected for the reasons set forth for claim 8.

**Referring to claims 19 and 20,**

Claims 19 and 20 are claims to methods carried out by the apparatus of claims 9 and 10. Therefore claims 19 and 20 are rejected for the reasons set forth for claims 9 and 10.

**Referring to claim 21,**

Claim 21 is a claim to a system that employs the apparatus of claim 1. Therefore claim 21 is rejected for the reasons set forth for claim 1.

**Referring to claim 22,**

Claim 22 is a claim to a system that employs the apparatus of claim 2. Therefore claim 22 is rejected for the reasons set forth for claim 2.

**Referring to claim 23,**

Claim 23 is a claim to a system that employs the apparatus of claim 3. Therefore claim 23 is rejected for the reasons set forth for claim 3.

**Referring to claim 24,**

Claim 24 is a claim to a system that employs the apparatus of claim 4. Therefore claim 24 is rejected for the reasons set forth for claim 4.

**Referring to claim 25,**

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Claim 25 is a claim to a system that employs the apparatus of claim 5. Therefore claim 25 is rejected for the reasons set forth for claim 5.

**Referring to claim 26,**

Claim 26 is a claim to a system that employs the apparatus of claim 6. Therefore claim 26 is rejected for the reasons set forth for claim 6.

**Referring to claim 28,**

Claim 28 is a claim to a system that employs the apparatus of claim 8. Therefore claim 28 is rejected for the reasons set forth for claim 8.

**Referring to claims 29 and 30,**

Claims 29 and 30 are claims to system that employs the apparatus of claims 9 and 10. Therefore claims 29 and 30 are rejected for the reasons set forth for claims 9 and 10.

***Conclusion***

**Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

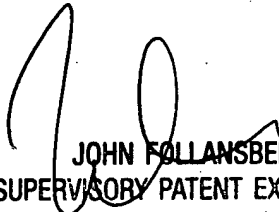
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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